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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,429	09/10/2003	Kazuto Shimada	Q77006	3180

23373 7590 07/11/2005

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WASHINGTON, DC 20037

EXAMINER
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CHU, JOHN S Y

ART UNIT	PAPER NUMBER
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1752

DATE MAILED: 07/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/658,429

Applicant(s)

SHIMADA ET AL.

Examiner

John S. Chu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 1-10, 19 and 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11 is/are rejected.
- 7) ☒ Claim(s) 12-18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

### DETAILED ACTION

This Office action is in response to the application filed September 10, 1993 and the election received May 9, 2005.

1. Applicant's election without traverse of Group I, species (2), claims 11-18 in the reply filed on May 9, 2005 is acknowledged.

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over NISHIOKA et al (5,567,568) in view of KAMIYA et al (5,112,743) and AOSHIMA (2002/0189476).

The claimed invention is drawn to the following:

11. A polymerizable composition comprising:
  - (1) a compound for generating a radical using light or heat;
  - (2) a polymerizable compound; and
  - (3) an infrared absorber, wherein;  
the molecular weight of the compound (1) generating a radical is at least 1,000 and no more than 50,000.

NISHIOKA et al discloses a photosensitive composition for lithographic printing plates comprising an ethylenically unsaturated compound, an aqueous alkali-soluble resin, a photopolymerization initiator and a negative-working diazo resin, see the abstract pasted below:

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A photosensitive composition comprising (A) an ethylenically unsaturated addition-polymerizable compound, (B) an aqueous alkali-soluble or swelling polymer which is capable of forming a film, (C) a photopolymerization initiator, (D) a negative-working diazo resin, and (E) a component which is soluble in a photosensitive solution, but floats on a surface of a photosensitive layer and is capable of forming an oxygen-intercepting layer during coating and drying is described. A photosensitive lithographic printing plate comprising a support coated with the above-described photosensitive composition and a mating layer provided thereon, wherein the surface of the mating layer has a micro pattern comprising (i) a portion which is coated with a composition comprising a copolymer containing at least one monomer unit having a sulfonic acid group and (ii) a portion which is uncoated with the composition is also described.

The applicants are further directed to column 14, lines 23-49 wherein the preferred examples of sensitizers are disclosed which can be included in the composition. Applicants are directed to line 39 wherein cyanine dyes are disclosed as suitable for use.

In the reference each of the claimed components of the polymerizable composition is disclosed to include the diazo resin which meets component (1), a ethylenically unsaturated compound that meets the claimed polymerizable compound (2), and a cyanine dye, however the reference fails to explicitly disclose a working example comprising a diazo resin having a molecular weight as claimed with an infrared absorbing cyanine dye.

KAMIYA et al is cited to disclose a light-sensitive composition for use in a presensitized printing plate wherein the composition comprises a diazo resin which gives excellent properties, such as high sensitivity and good adhesion between the substrates. Applicants are directed to column 8, lines 20-22 wherein the weight average molecular weight of the diazo resin is preferably disclosed to be 500 to 100,000. Here the skilled artisan is clearly directed to use diazo resins in the molecular weight ranges of 1,000 to 10,000 in compositions for printing plates with the reasonable expectation of obtaining the excellent properties as taught in KAMIYA et al.

AOSHIMA '476 is cited to disclose a planographic printing plate wherein the photosensitive layer comprises a light-to-heat converting agent, and a compound which is at least

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one of crosslinkable and/or polymerizable. Applicants are directed to page 13, subparagraph [0168] wherein the covalent bond forming properties can be found in the examples having a diazonium compound and an infrared absorbing agent. Here the infrared absorbing agents include cyanine dyes as listed on page 6, subparagraph [0084] and are thus known in the art of printing plates to be used as sensitizers.

It would have been *prima facie* obvious to one of ordinary skill in the art of presensitized printing plates comprising diazo resins to add a cyanine dye as an infrared absorbing agent as well as using a diazo resin having a molecular weight of 100 to 10,000 and reasonably expect same or similar results with respect to good adhesion, high sensitivity, high print capacity and a printing plate which is not substantially affected by oxygen.

4. Claims 12-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The claimed invention to the polymerizable composition comprising a macromolecular compound as recited in claim 12 having a radical generating compound with a side chain comprising a  $Z^- M^+$  is not taught in the prior art references of record.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. KANDA et al and NAGASE are cited of interest as prior art disclosing a diazo resin containing composition for printing plates.

WADE et al disclose polymeric compounds having a pendant sulphonato group and a cationic counter ion of ammonium, diazonium and others as seen in column 4, lines 6-65. The

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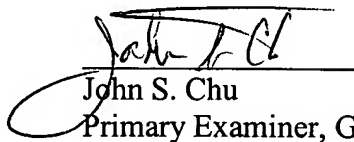
reference lacks the claimed polymerizable components such as an ethylenically unsaturated compound in the same composition with a diazo resin.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Chu whose telephone number is (571) 272-1329. The examiner can normally be reached on Monday - Friday from 9:30 am to 6:00 pm.

The fax phone number for the USPTO is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PMR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
John S. Chu  
Primary Examiner, Group 1700

J.Chu  
July 6, 2005